

For discussion
on 10 April 2017

Legislative Council Panel on Education
Basic Competency Assessment Research Study

Purpose

This paper updates Members on the arrangement of the Basic Competency Assessment Research Study.

Background

2. In response to the community's concerns on the Territory-wide System Assessment (TSA), the Secretary for Education announced in late October 2015 that the Coordinating Committee on Basic Competency Assessment and Assessment Literacy (the Committee) would conduct a comprehensive review on the arrangements of TSA. The review was premised on the three core values of "learning needs of students", "professionalism" and "mutual trust among stakeholders" to promote quality education. Basic Competencies are the essential knowledge and skills acquired by students in relation to the learning targets and objectives set out in the curriculum for each key stage, in order to learn effectively at next stage. The preliminary recommendations submitted by the Committee in February 2016 reaffirmed the intent and value of the establishment of TSA, recognised the data provided by school reports helped improve and adapt learning and teaching and the overall report facilitated the formulation of measures to support learning, etc. After examining various administrative arrangements and reporting formats (including conducting TSA in alternate years, on a sampling basis, etc.), the Committee considers that modifications to administrative arrangement of TSA are unable to effectively address the various concerns in the community.

3. For TSA at Primary 3 level, the Committee considered that the assessment papers and question design should be adjusted, and that the reports distributed to schools could adopt different formats to reflect the low-stakes nature of TSA and facilitate the refinement of school-based curriculum and teaching arrangements. The Committee considered that such initiatives should be implemented as a tryout arrangement in 2016.

4. The 2016 Tryout Study (Primary 3) mainly consisted of four new initiatives:

- (i) Improving assessment papers and question design;
- (ii) Enhancing school reports;
- (iii) Strengthening professional support measures; and
- (iv) Including a questionnaire survey on students' learning attitude and motivation.

The above basket of initiatives was intended to eliminate the incentives for over-drilling induced by TSA; provide targeted service to enhance the overall effectiveness of the cycle of Learning-Teaching-Assessment as an integral part to benefit students; and improve communication and deepen mutual trust with schools and parents.

5. The Committee collected views and suggestions in the following ways, with a view to providing feedback and facilitating the review of related measures:

(i) Quantitative approach

- Questionnaire surveys/opinion surveys: The targets include principals, curriculum leaders, teachers and parents. The main purpose is to collect stakeholders' views and suggestions on assessment items, reports, various support measures and stakes involved.

(ii) Qualitative approach

- Focus groups/interviews: The targets include principals, curriculum leaders, teachers and parents. The main purpose is to collect stakeholders' views and suggestions on assessment items, reports, various support measures and stakes involved.
- Case studies: Schools are invited to participate in the case studies, which aim to take a more in-depth look at the support measures, the processes and stakes involved, in a bid to examine the effectiveness and factors affecting the implementation of the Tryout Study at schools, and look into the solutions or views and suggestions.

6. The feedback and views collected from the 2016 Tryout Study (Primary 3 (Tryout Study) and experience of participating schools showed that the four new initiatives under the Tryout Study could effectively address the public concerns, including eliminating the incentives for over-drilling induced by TSA, alleviating stakeholders' concerns about the stakes involved, reflecting the "low stakes, no drilling" design of TSA and the original purpose of providing feedback on learning and teaching, deepening the mutual trust among schools, parents and various stakeholders, as well as enhancing assessment literacy so as to put TSA as well as learning and teaching back on the right track. Therefore, the Committee recommended extending the four new initiatives under the 2016 Tryout Study to all primary schools in the territory in order to collect more comprehensive feedback so as to continue to review and enhance related arrangements. The EDB accepted related recommendations and announced on 23 January 2017 the introduction of the 2017 Primary 3 "Basic Competency Assessment Research Study" (Research Study), extending the new initiatives for enhancement under the Tryout Study to all primary schools in the territory in 2017.

Basic Competency Assessment Research Study

Objectives

7. The Research Study has continued to premise on the three core values of “learning needs of students”, “professionalism” and “mutual trust among stakeholders” to promote quality education. Its design continues to be based on Basic Competencies, which are the essential skills in the three subjects of Chinese Language, English Language and Mathematics acquired by students upon completion of the three key learning stages (Primary 3, Primary 6 and Secondary 3), in order to learn more effectively at the next learning stage. Hence, the Research Study, besides the assessment part, also includes enhanced school reports as well as a basket of targeted complementary measures and resources for schools to make good use of assessment data for feedback which can enhance the overall effectiveness of learning, teaching and assessment to benefit students.

8. The objectives of implementing the Research Study are to expand the scope of the research in order to allow more schools to participate and understand the new initiatives under the Tryout Study. The EDB and the Committee will receive more comprehensive feedback and richer information from schools and various stakeholders so as to continue to review and enhance related arrangements. The Research Study is therefore not a resumption of the Primary 3 TSA, and the data of the Research Study will not be used to assess the performance of schools.

Assessment and administrative arrangements

9. The assessment part of the Research Study will continue to adopt the improvements in assessment papers and question design under the 2016 Tryout Study, including questions aligning with the requirements of Basic Competencies and tying in with schools’ daily teaching and students’ learning needs, etc., with the aim of alleviating the problem of drilling for schools and students to prepare for the assessment. In addition, in order to enhance transparency and allow the public to grasp and understand the rationale of question design for Primary 3 assessment under the Research Study, Hong Kong Examinations and Assessment Authority (HKEAA) will follow the practice of the 2016 Tryout Study and upload the question papers of Chinese Language, English Language and Mathematics, suggested answers together with the information on item design (e.g. the corresponding key learning objective, Basic Competency and question intent), as well as the marking schemes to the website on Basic Competency Assessments right after the completion of Primary 3 assessment in 2017.

Enhanced school reports

10. Under the Research Study, in addition to the assessment part, a basket of targeted

complementary measures and resources is also included for schools to make good use of assessment data for feedback which can enhance the overall effectiveness of learning, teaching and assessment to benefit students.

11. Regarding the enhancement of school reports, based on the feedback collected from the 2016 Tryout Study, schools considered that the school reports were very useful in enabling them to have an early grasp of students' overall performance in Basic Competency. They also appreciated the provision of different types of school reports for their selection. In this connection, the Research Study will continue to provide four different types of school reports (including existing version, simplified version, integrated version and information analysis report¹). Schools may, in the light of school-based needs and on a subject basis (Chinese Language, English Language and Mathematics), choose the reports that they consider appropriate in helping them analyse the performance of students, with a view to reviewing school-based curriculum planning, school-based assessment policies and teaching strategies to benefit students.

12. System level data cohort studies show a continuous upward trend not only in the percentage of Hong Kong students achieving Basic Competency in the three subjects of Chinese Language, English Language and Mathematics at Primary 3, but also in the percentage of students achieving Basic Competency at both Primary 3 and Primary 6. This reflects that the data and analysis provided in the TSA school reports have been serving the function of providing reference at lower and higher primary levels, facilitating schools in improving teaching strategies, curriculum planning and teaching activities at lower and higher primary levels that brings about a continuous increase in number of students who attain respective Basic Competency at Primary 3 and Primary 6 levels.

Proportion of students achieving Basic Competency at Primary 3²

	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)	Comparison of 2016 and 2004 (change in percentage points)
Chinese	82.7	84.7	85.2	84.9	85.4	85.9	86.4	86.1	86.6	86.3	86.4	85.8	+3.1
English	75.9	78.8	79.4	79.5	79.3	79.2	79.8	79.7	80.4	80.3	80.4	81.1	+5.2
Mathematics	84.9	86.8	86.9	86.9	86.9	87.0	87.0	87.3	87.5	87.4	87.6	89.9	+5.0

¹ Four report formats: (1) Existing version; (2) Simplified version (only school data is provided, without the data of participating schools); (3) Integrated version – Basic Competency Report by Item Groups (with exemplars on students' overall performance); and (4) Information Analysis Report – each item is paired with its corresponding learning objective, basic competency and testing focus as well as analysis for each option in multiple choice items.

² Due to Human Swine Influenza causing the suspension of primary schools, TSA was cancelled and no data has been provided. The 2016 P.3 TSA was conducted as part of the Tryout Study, The Basic Competency attainment rates of the Chinese language, English Language and Mathematics subjects were calculated using the data from some 50 participating schools.

Proportion of students achieving Basic Competency at both Primary 3 and Primary 6
among different cohorts

	2004 -2007 (%)	2005 -2008 (%)	2007 -2010 (%)	2008 -2011 (%)	2010 -2013 (%)	2012 -2015 (%)	Comparison of 2004-2007 and 2012-2015 (change in percentage points)
Chinese Language	72.5	74.0	75.3	75.1	75.9	75.9	+3.4
English Language	68.0	67.9	70.2	69.5	69.8	70.1	+2.1
Mathematics	80.4	82.0	81.7	81.5	81.4	81.4	+1.0

Diversified professional support

13. Under the Research Study, based on schools' different needs in enhancing learning, teaching, assessment and assessment literacy, the EDB will continue to provide diversified professional support measures including different types of workshops, school-based support services, collaboration with tertiary institutions and schools, parent education, etc., as well as Web-based Learning and Teaching Support and central assessment item bank Student Assessment Repository (STAR) platform.

Non-academic data

14. In addition, the Research Study will adopt similar arrangements for the 2016 Tryout Study to include the questionnaire survey on students' learning attitude and habits to collect students' non-academic data (e.g. time spent on extra-curricular activities, learning interests, learning habits and other relevant data) so as to gain a better understanding of the factors affecting learning performance and to provide further assistance for student learning. The EDB, as in previous years, will follow the Government's established procurement procedures to invite quotations from qualified academic institutions. The academic institution responsible will obtain prior consent from schools and parents before conducting the questionnaire survey.

15. The aforementioned series of arrangements will be implemented in phases from April 2017 to June 2018. The relevant sections of the EDB and HKEAA will inform schools of the arrangements and the mode of participation. Schools may, in the light of school-based situations and subject needs, choose the complementary measures and resources that they consider appropriate.

16. Through the Research Study, we hope to foster and realise mutual trust among stakeholders, and to promote collaboratively quality education that addresses students' learning needs, embodies professionalism and is founded on mutual trust among stakeholders. We hope to bring the functions of Basic Competency Assessments into full

play such that school-based curriculum and teaching arrangements could be improved through the use of assessment data, so as to enhance students' learning effectiveness.

Latest situation

17. A briefing session by HKEAA for all primary schools in the territory on the arrangements of the 2017 Research Study was conducted on 15 February 2017. The Research Study is in good progress. All public funded primary schools (i.e. more than 470 schools) have arranged to participate in the Research Study; and more than 20 private primary schools have also opted to join. Should schools encounter any special circumstances or difficulties in participating in the Research Study, the Regional Education Offices of EDB would look into the matter and provide assistance.

18. To facilitate the implementation of the Research Study, seminars for schools in the 18 districts are organised to introduce and share the concept and implementation of "assessment for learning" with school managers, principals, teachers and parent representatives. The EDB is also preparing a resource kit for promoting "assessment for learning" to enhance the understanding of different stakeholders on "assessment for learning" and Basic Competency Assessments.

Researches on overseas experience

19. In addition to the implementation of the Research Study, the EDB and the Committee have been making reference to overseas experience. Both local and overseas experience indicated that systematic assessments are of great value, particularly at Primary 3 level where learning diversity starts to emerge. Assessments enable teachers and schools to adjust their teaching with a view to reaping the greatest benefit to students' learning. Researches into overseas³ experience show that students' performance in international and national assessments dropped substantially when assessments are abolished. On the contrary, students' performance improved considerably when assessments are introduced. While there may have been other factors accounting for the differences in performance, the correlation between assessments and performance cannot be neglected.

20. The information note on "Competency assessment systems in selected places" from the Research Office of the Legislative Council Secretariat sets out that Canada and the United States conduct the assessment using the method of "selecting schools and students by random sampling". We need to point out that the relevant information note only sets out the assessment system at the national level of selected places, and does not provide information on the regional or provincial assessments and the related forms. For example, in Canada and the United States, in addition to the aforementioned national level

³ For example, the province of Manitoba, Prince Edward Island in Canada, and Welsh in the United Kingdom. Details are set out at [Annex](#).

assessment, provincial assessments are arranged by different provinces in the country, such as the provincial assessments conducted in different provinces of Canada mentioned in footnote (2). Using such sampling method only provides assessment results at the national level. No school level report is provided. School level reports are basically provided through provincial assessments, and the performance of individual schools will be made available to parents and the public.

21. If Hong Kong follows the example of Canada and the United States to conduct the Territory-wide System Assessment by sampling, only territory-wide level assessment results will be provided. Without school level reports, schools will not be able to grasp the overall performance of students to improve teaching arrangements or enhance curriculum planning. The Committee has pointed out in previous review report that assessments in the form of sampling could not address various concerns in the community.

Review

22. The EDB and the Committee will, through the Research Study, continue to listen to views of various parties regarding the implementation of Basic Competency Assessments. Related recommendations and feedback will be used to review the arrangements for TSA and related support measures.

Advice sought

23. Members are invited to note the arrangement of the Research Study.

Education Bureau
April 2017

Student Competency Assessment (Overseas Experience)

I. Canada⁴

The Province of Manitoba

In Canada, a scholar requested the re-establishment of standardised testing and wrote an article⁵ indicating that the province of Manitoba abolished assessments at Grades 3, 6 and 9 (similar to Primary 3, Primary 6 and Secondary 3 in Hong Kong) since 1999. Thereafter, in 2013, the Pan-Canadian Assessment Program (PCAP) indicated that the performance of students of Manitoba in Science, Reading and Mathematics has declined from the average in Canada to the last in the country.

The Province of Prince Edward Island

2. Since the introduction of standardised testing in the province of Prince Edward Island in Canada, the performance of students has risen from the bottom in the country to close to the national average in Science, Reading and Mathematics in PCAP.

3. The performance of students of Manitoba and Prince Edward Island in Reading, Mathematics and Science are shown in Charts 1A to 1C; Charts 2A to 2C; and Charts 3A to 3C respectively.

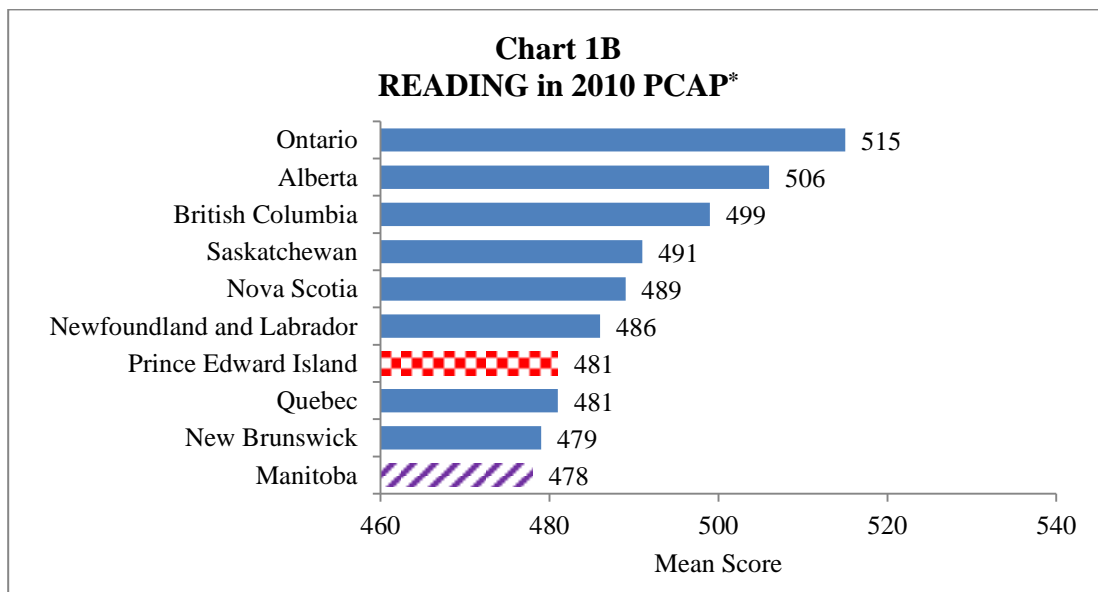
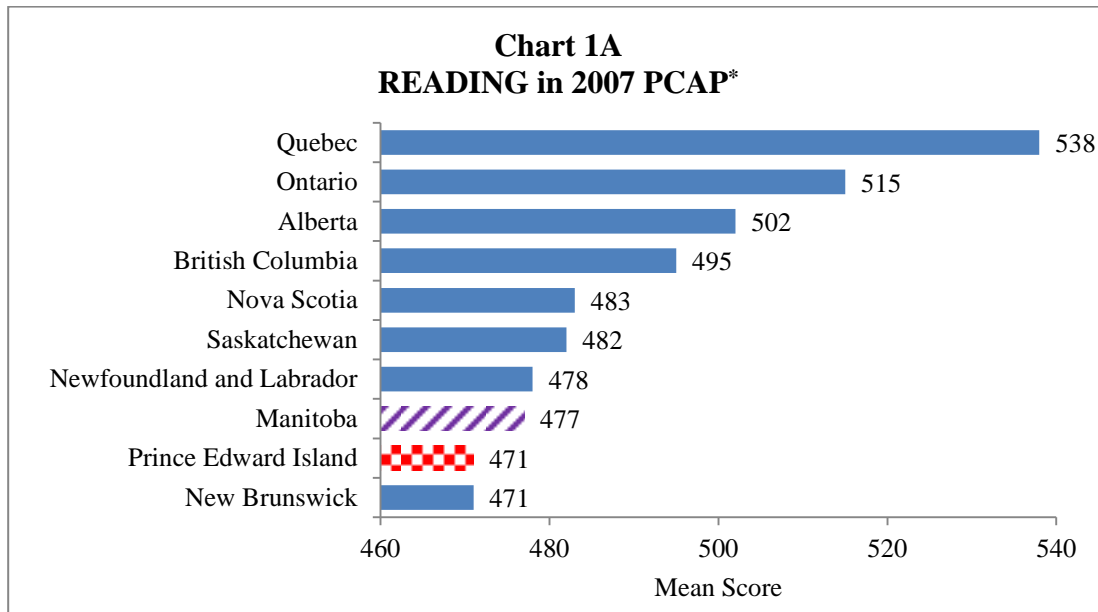
⁴ In Canada, there is no federal department of education and no integrated national system of education. Each of Canada's ten provinces and three territories is responsible for designing its own assessment policies to support and monitor student learning. In Canada, the Pan Canadian Assessment Program ("PCAP") was started in 2007 by the Council of Ministers of Education, Canada (CMEC). PCAP is a test that is given every three years to Grade 8 students to find about how well education systems are meeting the needs of students and society. PCAP is not intended to replace provincial and territorial assessments, but rather to complement them. On a program level, jurisdictions can validate the results of their own assessments against PCAP results as well as those of the Programme for International Student Assessment (PISA).

Source: Council of Ministers of Education, Canada.

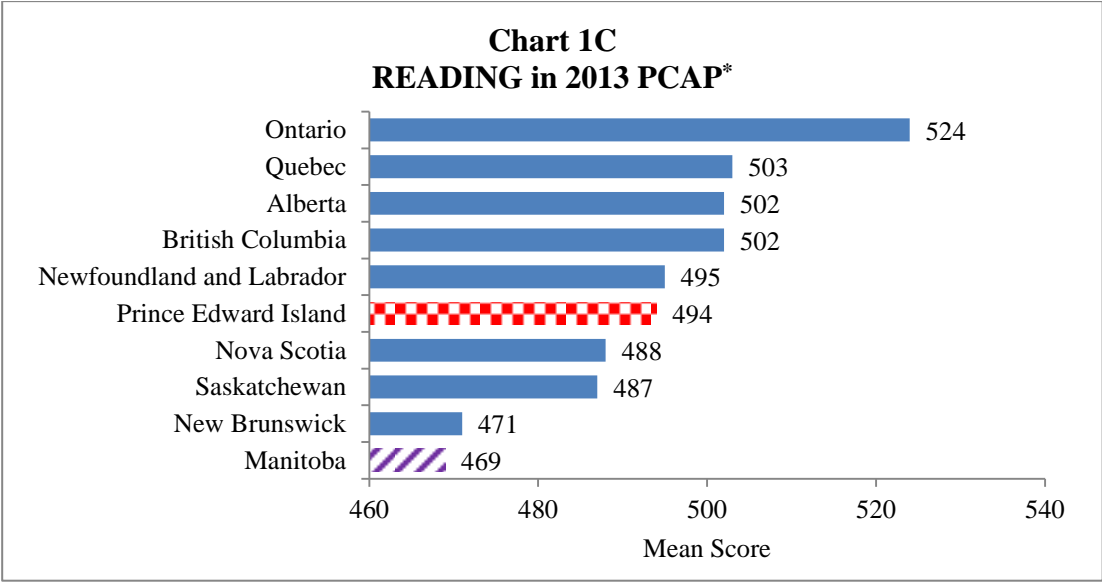
⁵ *Source: Bring Back Standardized Testing, Frontier Centre for Public Policy*

<https://fcpp.org/2009/04/17/bring-back-standardized-testing/>

Chart 1 Performance of Canadian Students (Grade 8/Secondary II) by Jurisdiction in Pan-Canadian Assessment Program (PCAP) - Reading⁶

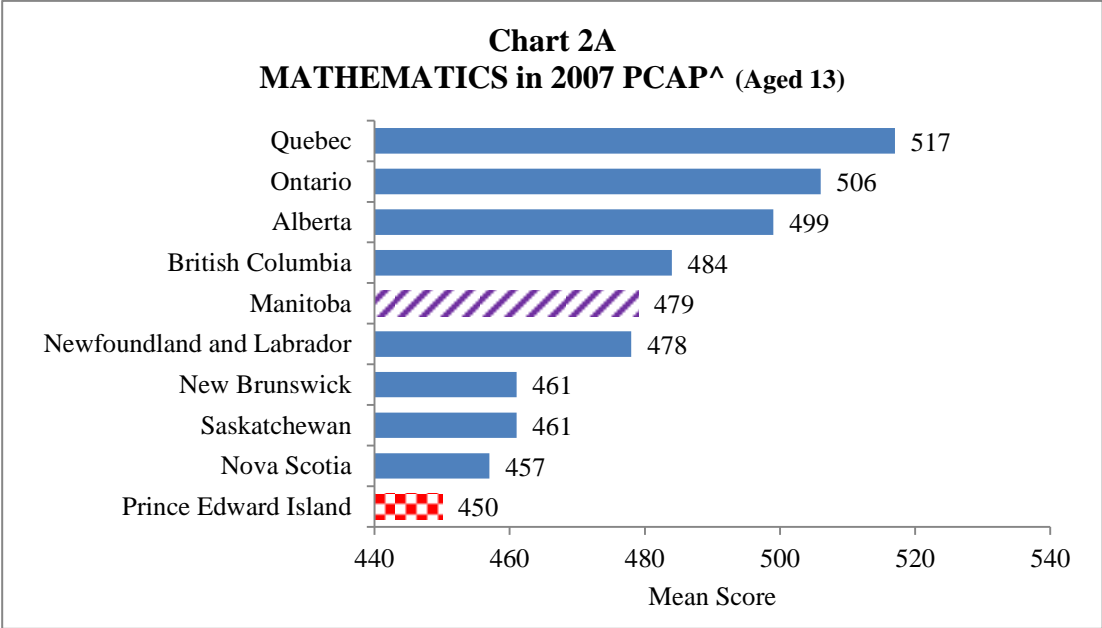


⁶ The 2007 Pan-Canadian Assessment Program (PCAP) was targeted at 13-year-old students, and thereafter, in order to compare the reading performance in 2010 and 2013, students' score in the reading performance in 2007 was rescaled based on the 2010 standard.

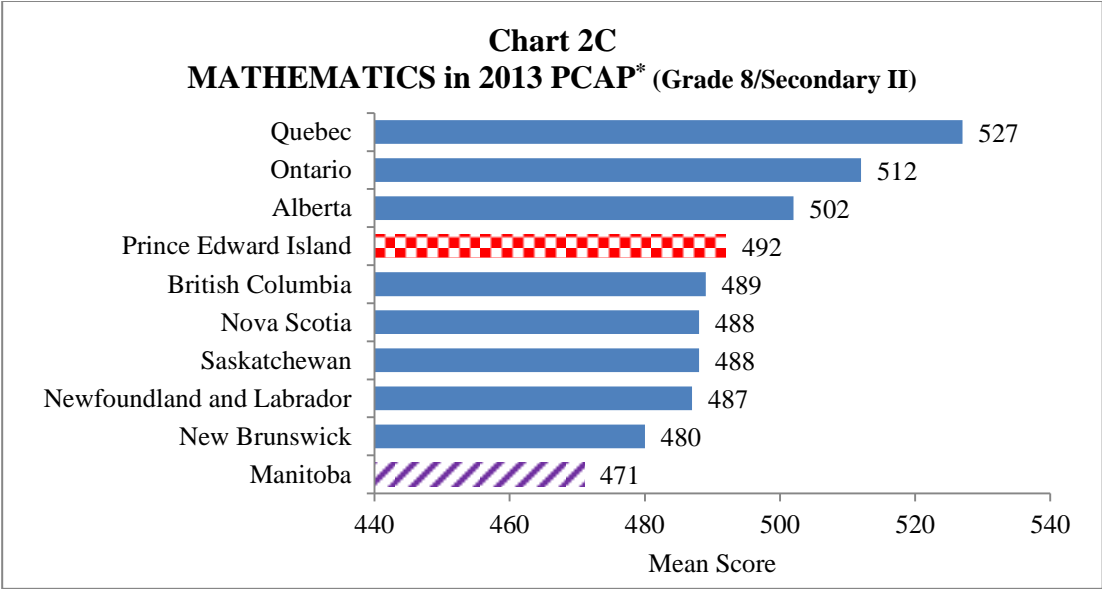
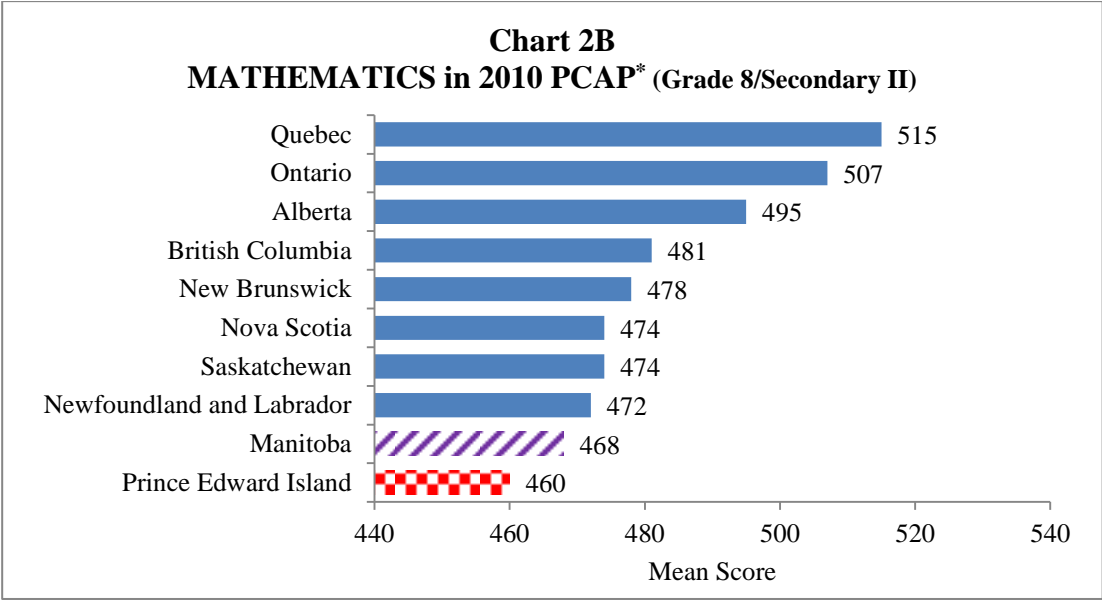


*Data source: *PCAP 2013 Report on the Pan-Canadian Assessment of Science, Reading, and Mathematics*, Council of Ministers of Education, Canada.

Chart 2 Performance of Canadian Students (Grade 8/Secondary II/Aged 13) by Jurisdiction in Pan-Canadian Assessment Program (PCAP) - Mathematics⁷



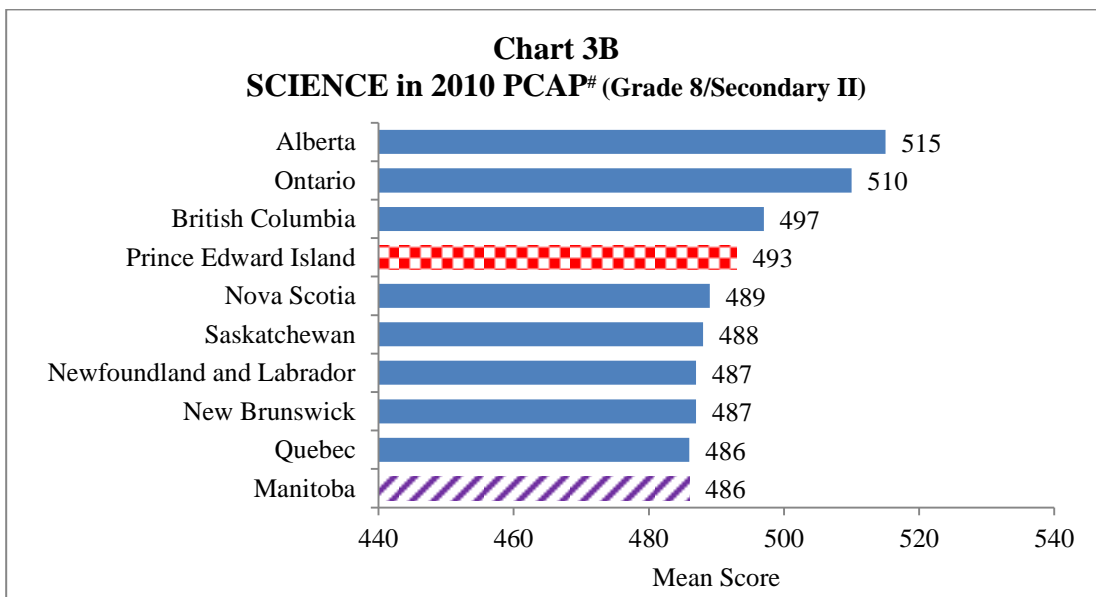
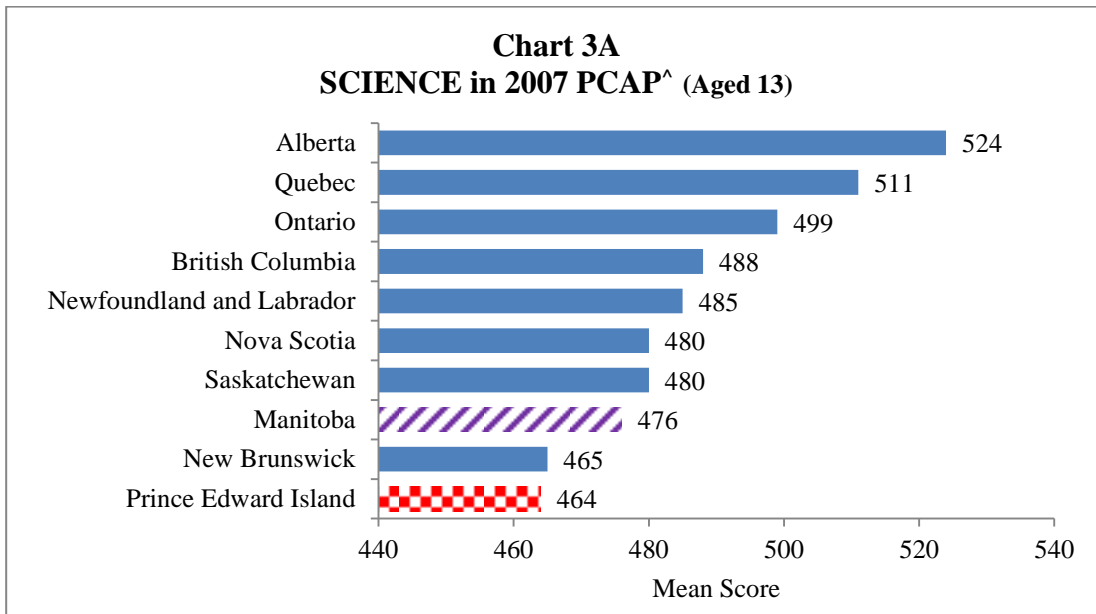
⁷ The 2007 Pan-Canadian Assessment Program (PCAP) was targeted at 13-year-old students, the targets of assessment have changed to Grade 8 / Secondary II students since 2010.



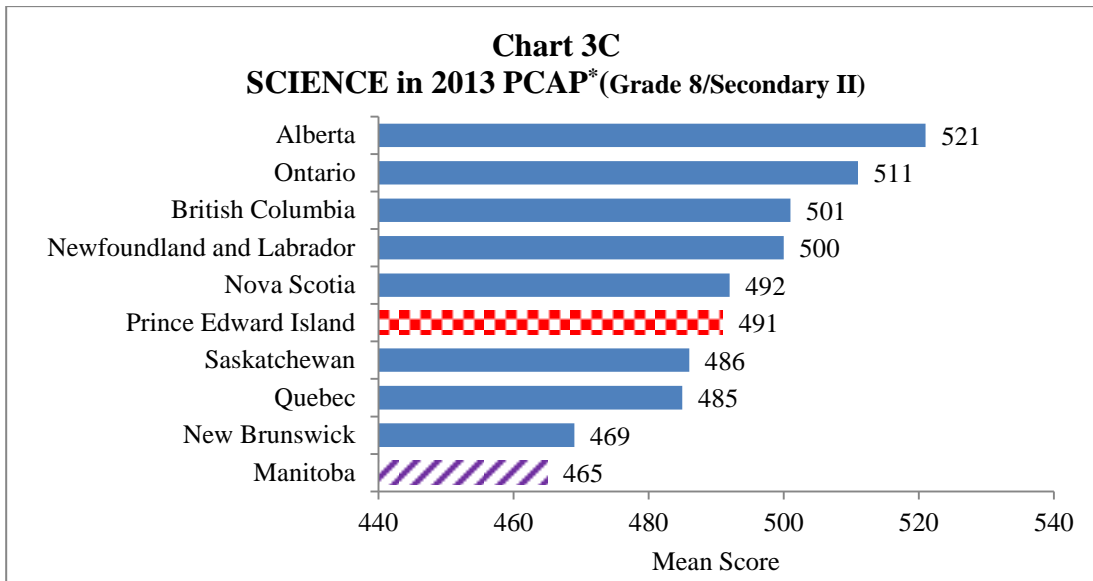
^Data source: *PCAP-13 2007 Report on the Assessment of 13-Year-Olds in Reading, Mathematics, and Science*, Council of Ministers of Education, Canada.

*Data source: *PCAP 2013 Report on the Pan-Canadian Assessment of Science, Reading, and Mathematics*, Council of Ministers of Education, Canada.

Chart 3 Performance of Canadian Students (Grade 8/Secondary II/Aged 13) by Jurisdiction in Pan-Canadian Assessment Program (PCAP) - Science⁸



⁸ The 2007 Pan-Canadian Assessment Program (PCAP) was targeted at 13-year-old students, the targets of assessment have changed to Grade 8 / Secondary II students since 2010.



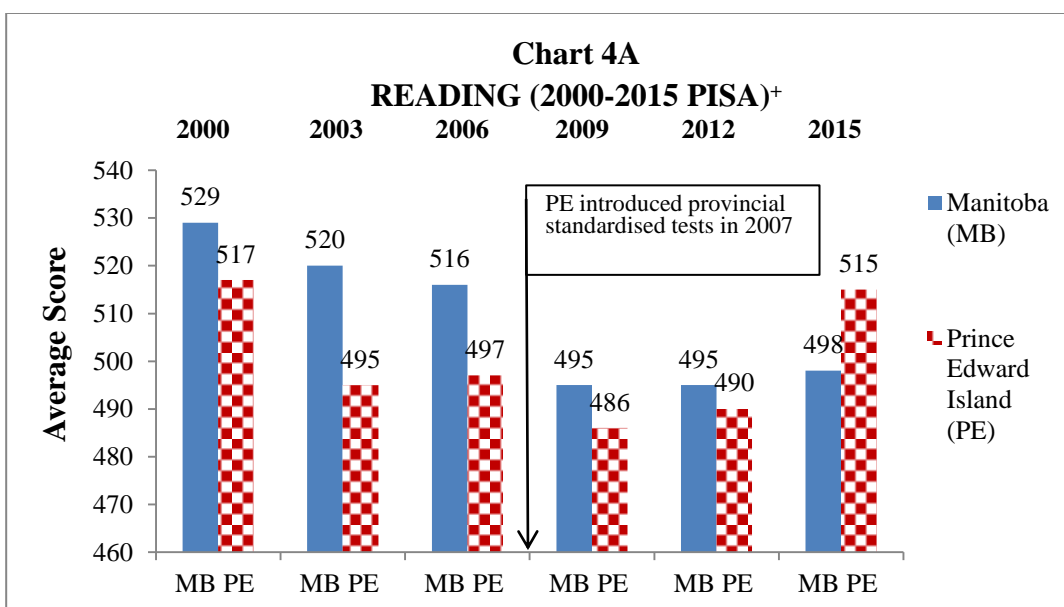
^Data source: PCAP-13 2007 Report on the Assessment of 13-Year-Olds in Reading, Mathematics, and Science, Council of Ministers of Education, Canada.

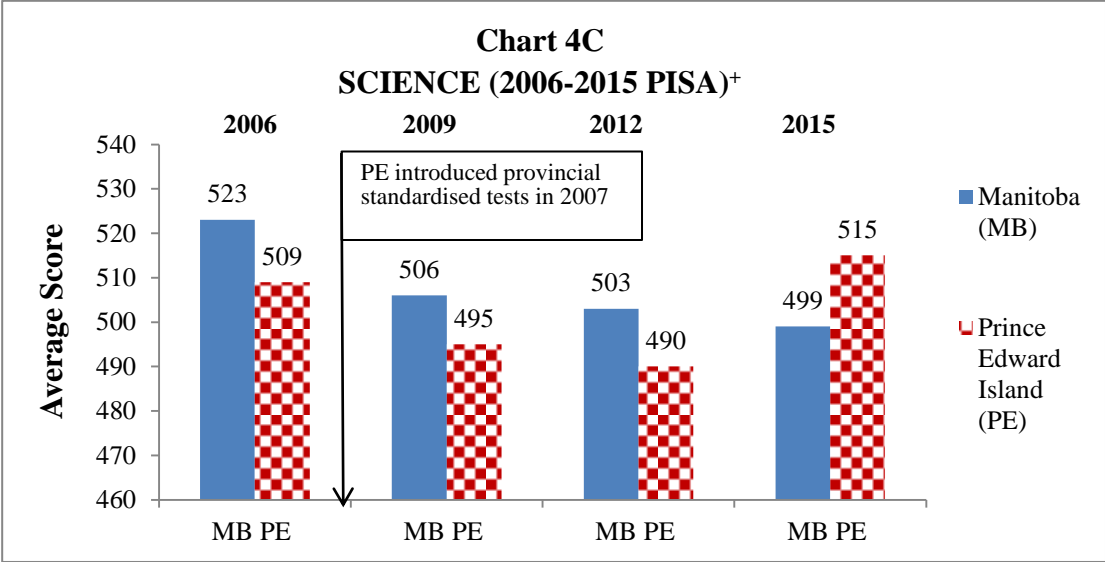
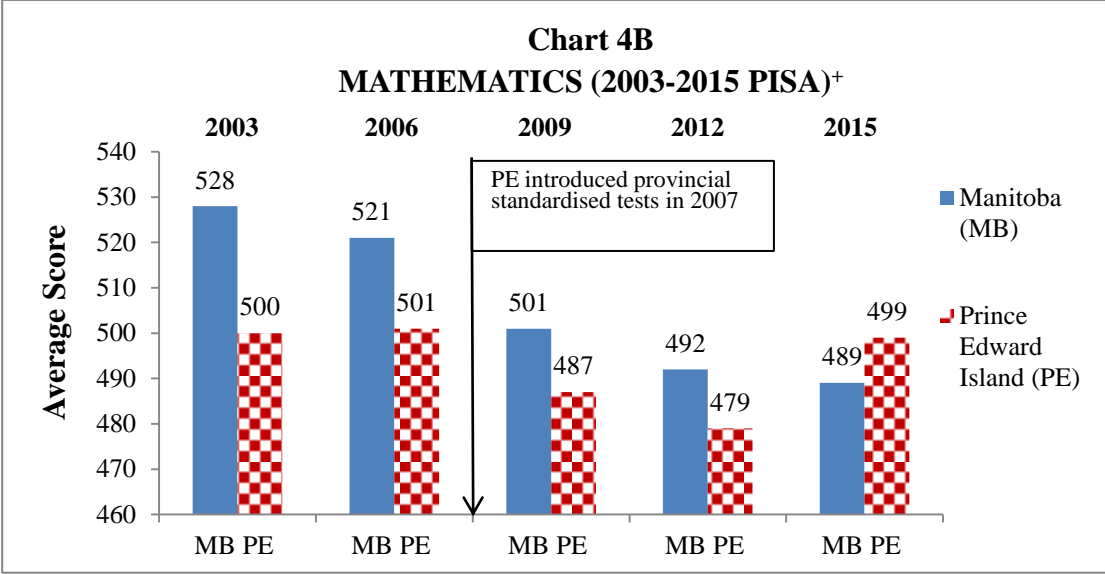
Data source: PCAP-2010 Report on the Pan-Canadian Assessment of Mathematics, Science, and Reading, Council of Ministers of Education, Canada.

* Data source: PCAP 2013 Report on the Pan-Canadian Assessment of Science, Reading, and Mathematics, Council of Ministers of Education, Canada.

4. In addition, the performance of students of Manitoba and Prince Edward Island in Programme for International Student Assessment (PISA) has also reflected related adjustment. Their performance in Reading, Mathematics and Science are at Charts 4A to 4C respectively.

Chart 4 Performance of Canadians Aged 15 in Manitoba(MB) and Prince Edward Island (PE) in Programme for International Student Assessment (PISA)





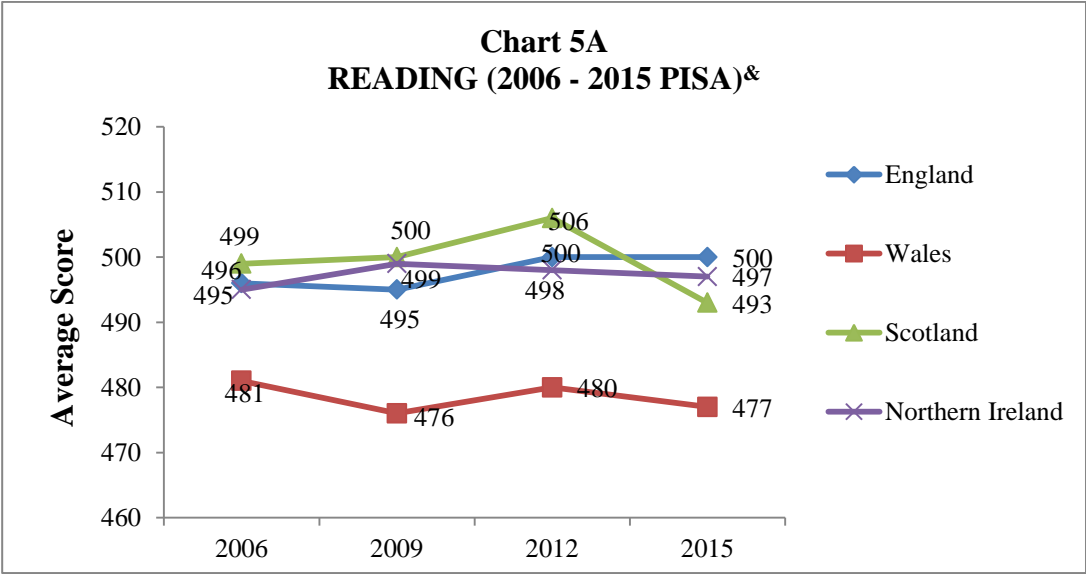
⁺Data source: *Measuring up: Canadian Results of the OECD PISA Study-The Performance of Canada's Youth in Science, Reading, and Mathematics-2015 First Results for Canadians Aged 15*, Council of Ministers of Education, Canada.

II. The United Kingdom

Welsh

5. As pointed out in an article⁹ by *the Economist* in March 2017, after Welsh in the United Kingdom abolished the assessments for 11 and 14-year-olds (similar to Primary 4 and Secondary 3 in Hong Kong) in 2004, experience similar to the Canadian one occurred. The performance of students declined, as reflected in the Programme for International Student Assessment (PISA) in 2006. We observed that the performance of students in Reading, Mathematics and Science continued to decline in 2009. The article also pointed out that although Welsh resumed the assessments of the performance of languages and Mathematics since 2013¹⁰, the performance of students of Welsh in PISA in 2015 was still much worse than England, Scotland and Northern Ireland. Related performance of students of Welsh in Reading, Mathematics and Science in PISA is shown in Chart 5 respectively.

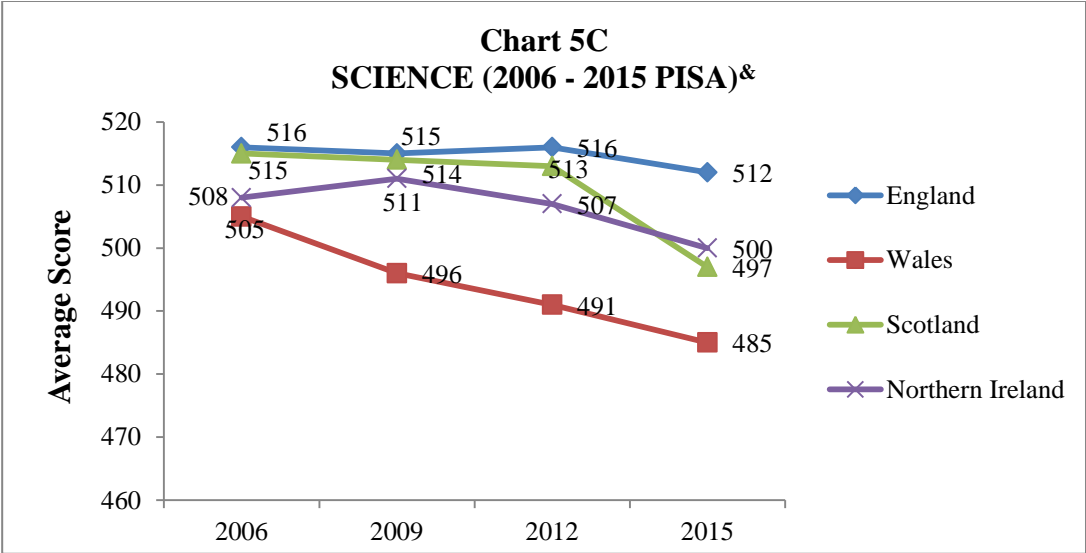
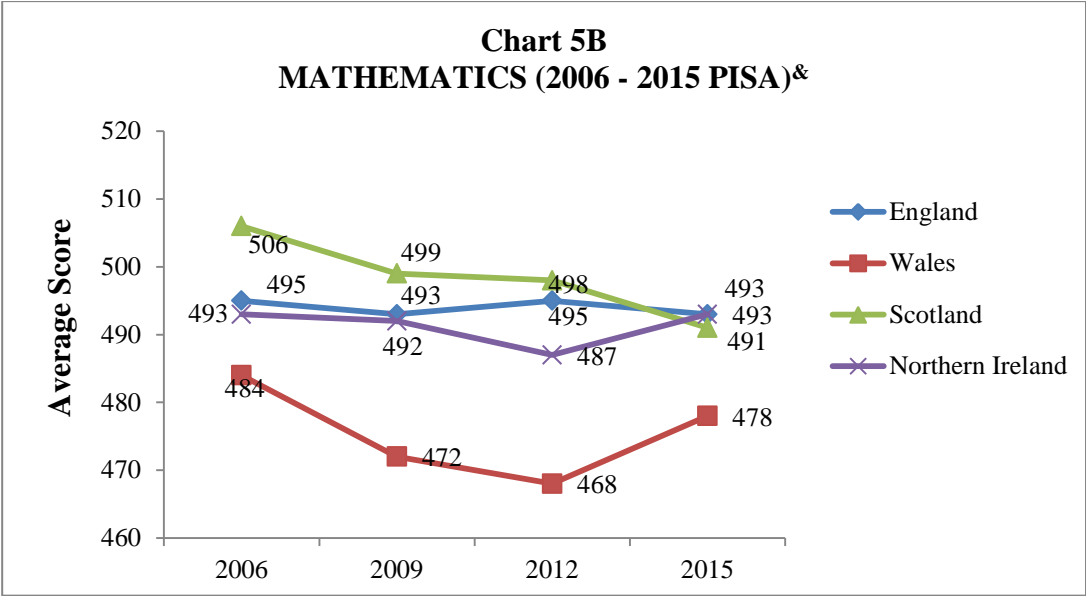
Chart 5 Performance of Students in the United Kingdom in PISA



⁹ Source: *The struggle to improve the worst education system in Britain, The Economist* <http://www.economist.com/news/britain/21719404-poverty-only-one-explanation-bad-test-results-wales-struggle-improve-worst?frsc=dg%7Ce>

¹⁰ The Welsh Government published its National Literacy and Numeracy Framework (LNF) on 28 January 2013. In his statement making the announcement, the Minister said that the LNF would become a statutory curriculum requirement from September 2013, with formal assessment against the LNF becoming a requirement from September 2014.

Source: *Learning Wales*



&Data Source: *NFER Education Briefings- Key insights from PISA 2015 for the UK nations. NFER Education Briefings*, National Foundation for Educational Research.